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JUL 16 1964

CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
IDAHO

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,
and
IDAHO STATE RECLAMATION ENGINEER

Data included in this report were obtained by the agency named above in
cooperation with the Comptroller of Water Rights of British Columbia, and
Federal, State and private organizations listed on the last page of this
report.

AS OF
FEB. 1, 1964

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 2807, Portland, Oregon 97208.

PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN. 15 - APR. 1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
IDAHO

Report prepared by

MORLAN W. NELSON Snow Survey Supervisor

and

J. ALDEN WILSON Asst. Snow Survey Supervisor

SOIL CONSERVATION SERVICE
SNOW SURVEY SECTION
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Issued by

LEE T. MORGAN

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
BOISE, IDAHO

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STATE RECLAMATION ENGINEER
DEPARTMENT OF RECLAMATION
BOISE, IDAHO

WATER SUPPLY OUTLOOK for IDAHO



GENERAL SUMMARY

The 1964 water supply outlook is forecast to be near normal for most drainages in Idaho. The Bear River in the southeastern portion of the state is the only exception. It is forecast to flow significantly below normal. The April through September streamflow for the major rivers in the state varies from 93 percent of normal on the Spokane near Post Falls to 105 percent on the Big Lost near Mackay.

Snowfall has followed an unusual pattern for 1964. The valley and foothill areas have an extremely heavy snow cover varying from one to five times their normal amounts. The snow pack in the high mountainous elevations is near normal or slightly below. Snow cover varies from 78 percent of normal on the Kootenai River to 123 percent on the Portneuf.

Soil moisture sites throughout the state indicate relatively warm unfrozen soils beneath the snow pack. As a result of the insulating effect of early snow last fall, soil temperatures vary from 33 to 38 degrees. This is a highly desirable situation because the soil can slow down runoff by absorbing melting snow or rain. During the past two winter seasons, the soils have been frozen and runoff was very rapid on some rivers.

On those streams originating in the foothills, where there is a record-breaking snow pack, the snow poses a distinct hazard. If Chinook winds or unseasonably warm weather should occur suddenly, accompanied by rain, heavy volumes of water would come down these streams which ordinarily

flow very little or nothing. A normal spring could bring these large volumes of water down evenly over a long period of time and not create any problems. However, at this time, the snow pack at these low elevations is still continuing to build up and the possibility of sudden warm weather accompanied by rain increases as spring approaches.

At the high elevations, about two-thirds of the total year's snowfall is down by February 1. For the valley and low mountain residents of Idaho, this winter has seemed unduly hard, and it has been for these areas. However, in the high mountainous areas throughout the state, snowfall has been near normal or slightly below. In these high areas, more snow-water is needed to produce a normal snow pack for 1964.

Reservoir-stored water throughout the state is generally good although not always up to normal, such as on the Bear River and Owyhee River.

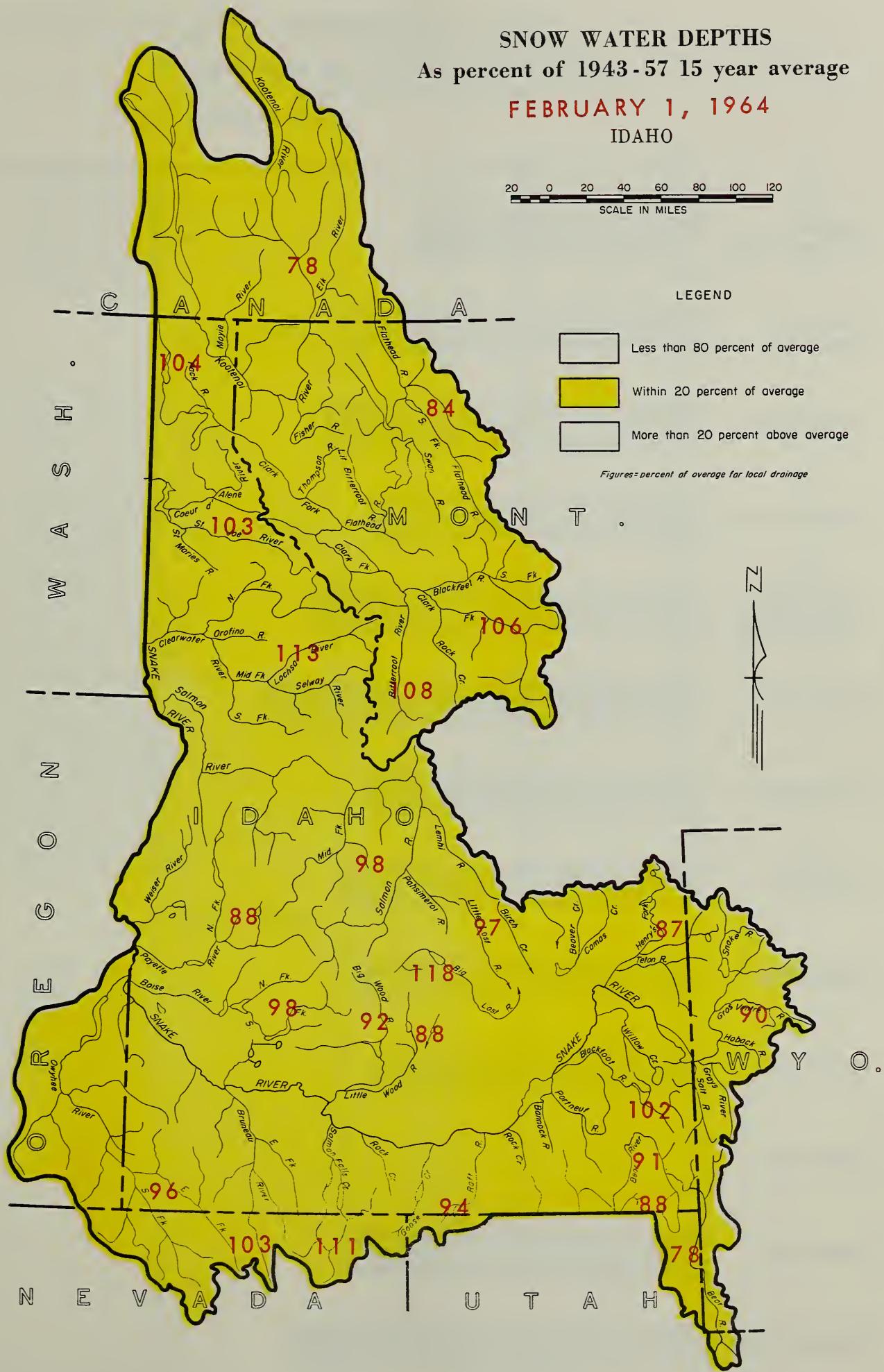
SNOW WATER DEPTHS
As percent of 1943-57 15 year average
FEBRUARY 1, 1964
IDAHO

20 0 20 40 60 80 100 120
SCALE IN MILES

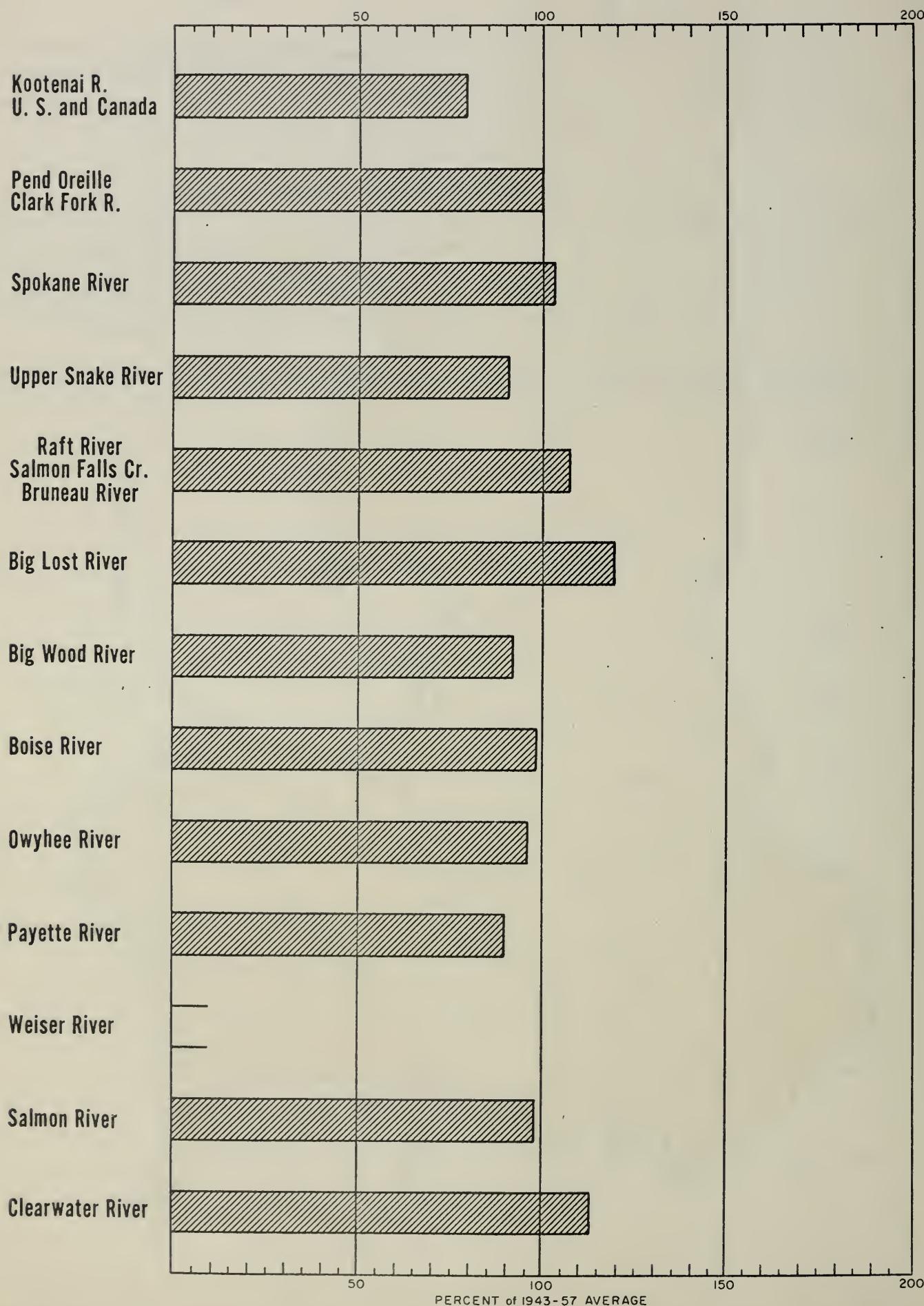
LEGEND

- Less than 80 percent of average
- Within 20 percent of average
- More than 20 percent above average

Figures = percent of average for local drainage



SNOW WATER DEPTHS
BY DRAINAGE
Compared To The 1943 - 57 15 Yr. Average
Snow Cover as of Approximately



COMPARISON of SNOW COVER

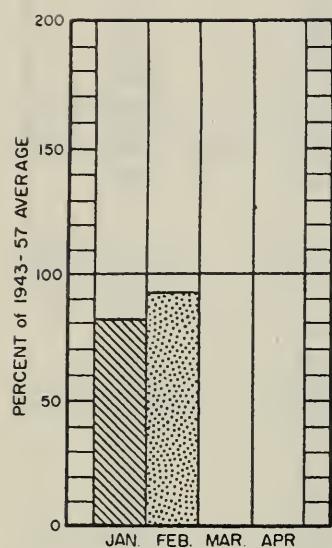
RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	AVERAGE ^b
<u>UPPER COLUMBIA BASIN</u>			
Kootenai River	8	105	78
Flathead River	6	150	84
Clark Fork River	11	123	106
Bitterroot River	2	187	108
Priest River	2	248	104
Spokane River	1	184	103
<u>SNAKE BASIN</u>			
Mud Lake Drainages	2	183	77
Upper Snake River	19	158	90
Henry's Fork River	3	170	87
Teton River	2-3	191	78
Blackfoot River	3	240	102
Portneuf River	3	394	123
Raft River - Goose Creek	1	240	94
Salmon Falls Creek	8	294	111
Bruneau River	4	244	103
Little Lost River	4	228	97
Big Lost River	1-9	274	118
Big Wood River	6	148	92
Little Wood River	2-3	151	88
Boise River	10	184	98
Owyhee River	11	732	96
Payette River	8-11	167	88
Weiser River	3	177	--
Salmon River	8	169	98
Lemhi River	4	193	--
Clearwater River	3-9	176	113
Palouse River	5	906	158
<u>GREAT BASIN</u>			
Upper Bear River	7	180	78
Montpelier Creek	4	270	--
Mink Creek	3	192	91
Cub River	2	230	88
Malad River	1	475	121

SNOW WATER DEPTHS ACCUMULATION

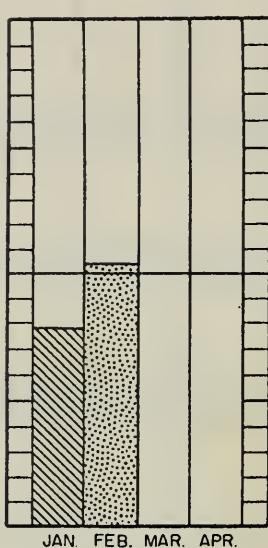
For Selected Snow Courses

As Compared To 1943-57 15Yr. Average

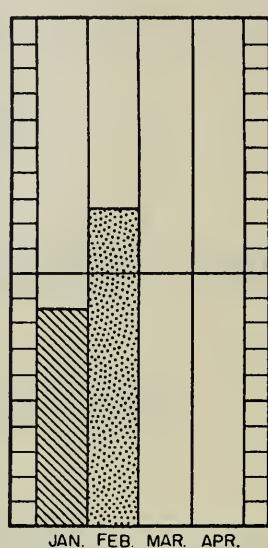
FEBRUARY 1, 1964



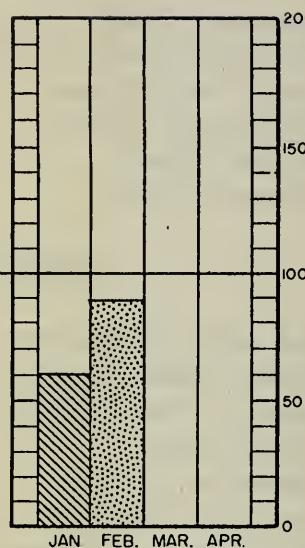
Benton Spring



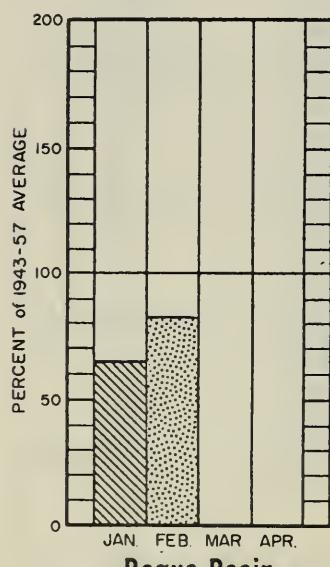
Lookout



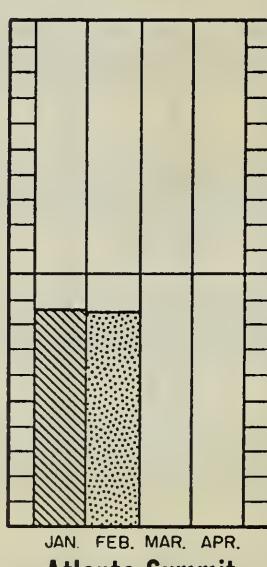
Pierce Ranger Sta.



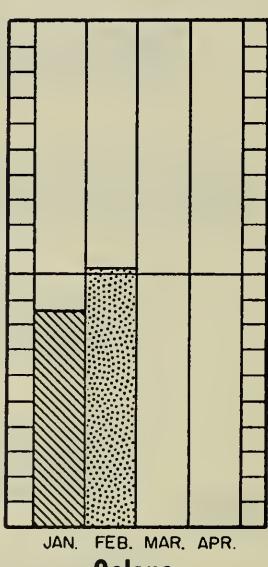
Big Creek Summit



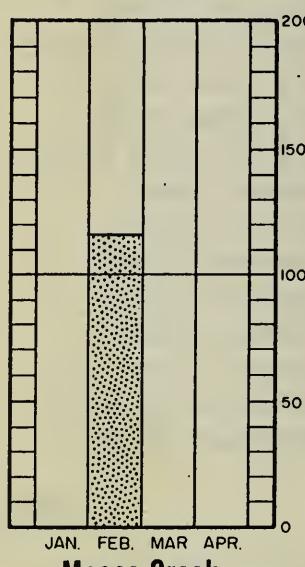
Bogus Basin



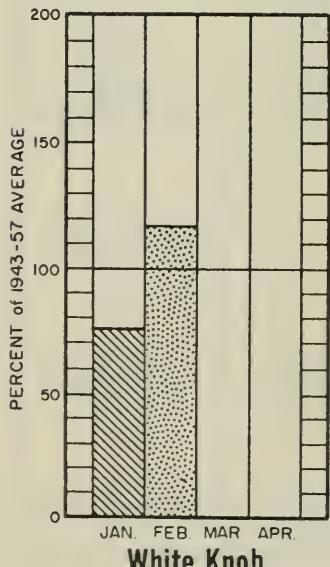
Atlanta Summit



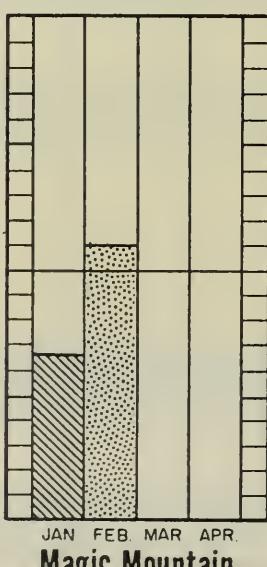
Galena



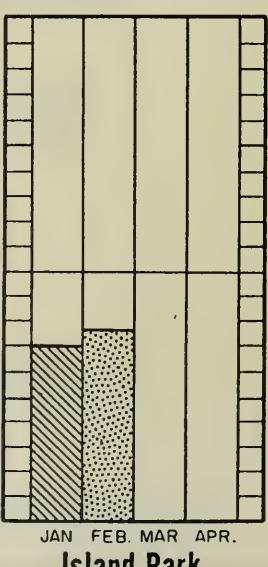
Moose Creek



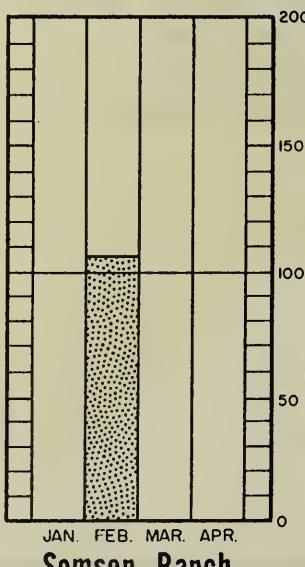
White Knob



Magic Mountain



Island Park

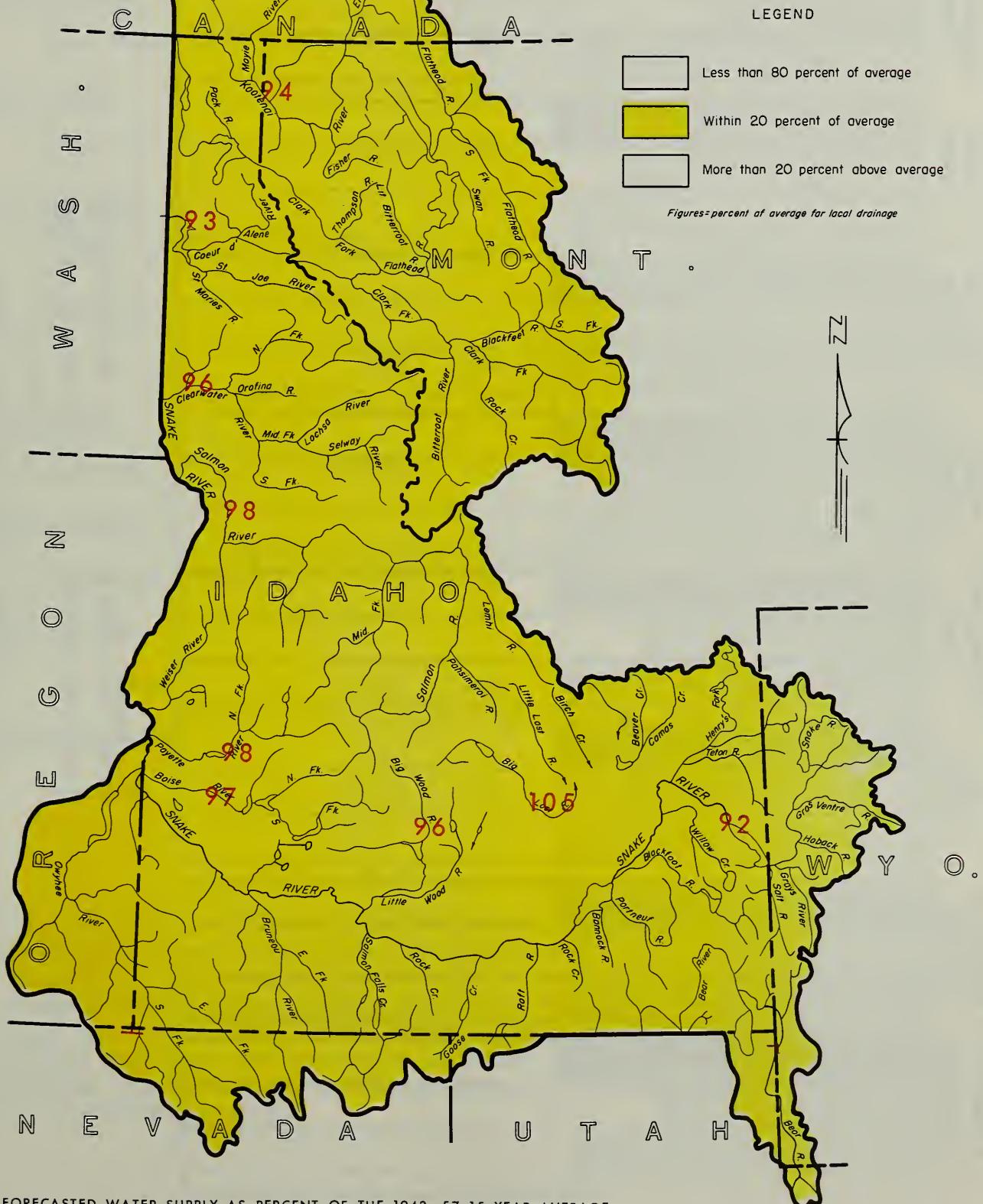


Somsen Ranch

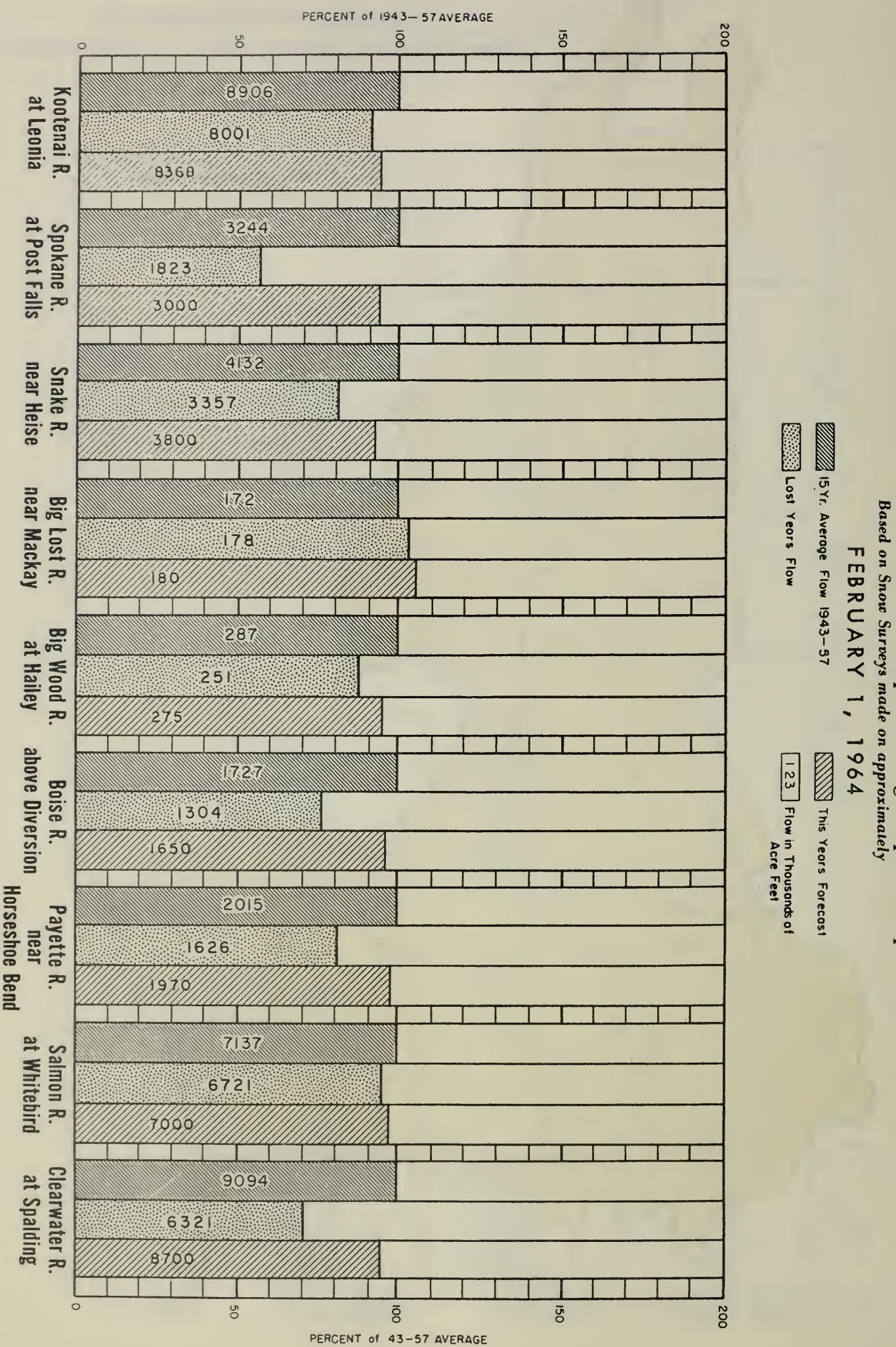
PROSPECTIVE STREAMFLOW
Based on Snow Surveys made on approximately

FEBRUARY 1, 1964
IDAHO

20 0 20 40 60 80 100 120
SCALE IN MILES



FORECASTED WATER SUPPLY AS PERCENT OF THE 1943-57 15 YEAR AVERAGE



WATER SUPPLY OUTLOOK (expressed as "Poor", "Fair", "Average" or "Excellent")^a and STREAMFLOW FORECASTS (1,000 Ac. Ft.)

STREAM and/or FORECAST POINT	OUTLOOK	FORECAST THIS YEAR	FORECAST PERIOD	1943-57 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE
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KOOTENAI RIVER

Leonia	(at)	Avg.	8368	Apr-Sep	8906	94
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SPOKANE RIVER

Post Falls <u>1/</u>	(at)	Avg.	3000	Apr-Sep	3242	93
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SNAKE RIVER

Heise <u>2/</u>	(nr)	Avg.	3800	Apr-Sep	4132	92
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BIG LOST RIVER

Mackay <u>3/</u>	(nr)	Avg.	180	Apr-Sep	172	105
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BIG WOOD RIVER

Hailey	(at)	Avg.	275	Apr-Sep	287	96
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BOISE RIVER

Boise <u>4/</u>	(nr)	Avg.	1650	Apr-Sep	1704	97
-----------------	------	------	------	---------	------	----

PAYETTE RIVER

Horseshoe Bend <u>5/</u>	(nr)	Avg.	1970	Apr-Sep	2016	98
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SALMON RIVER

Whitebird	(at)	Avg.	7000	Apr-Sep	7137	98
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CLEARWATER RIVER

Spalding	(at)	Avg.	8700	Apr-Sep	9094	96
----------	------	------	------	---------	------	----

(a) Includes seasonal runoff, stored water, diversions, and other sources.

(c) Assuming normal meteorological conditions.

1/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie canals. 2/ Corrected for storage in Jackson Lake and Palisades. 3/ Observed flow corrected for storage in Mackay Reservoir and diversion in Sharp Ditch. 4/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak. 5/ Corrected for storage in Cascade and Deadwood Reservoirs.

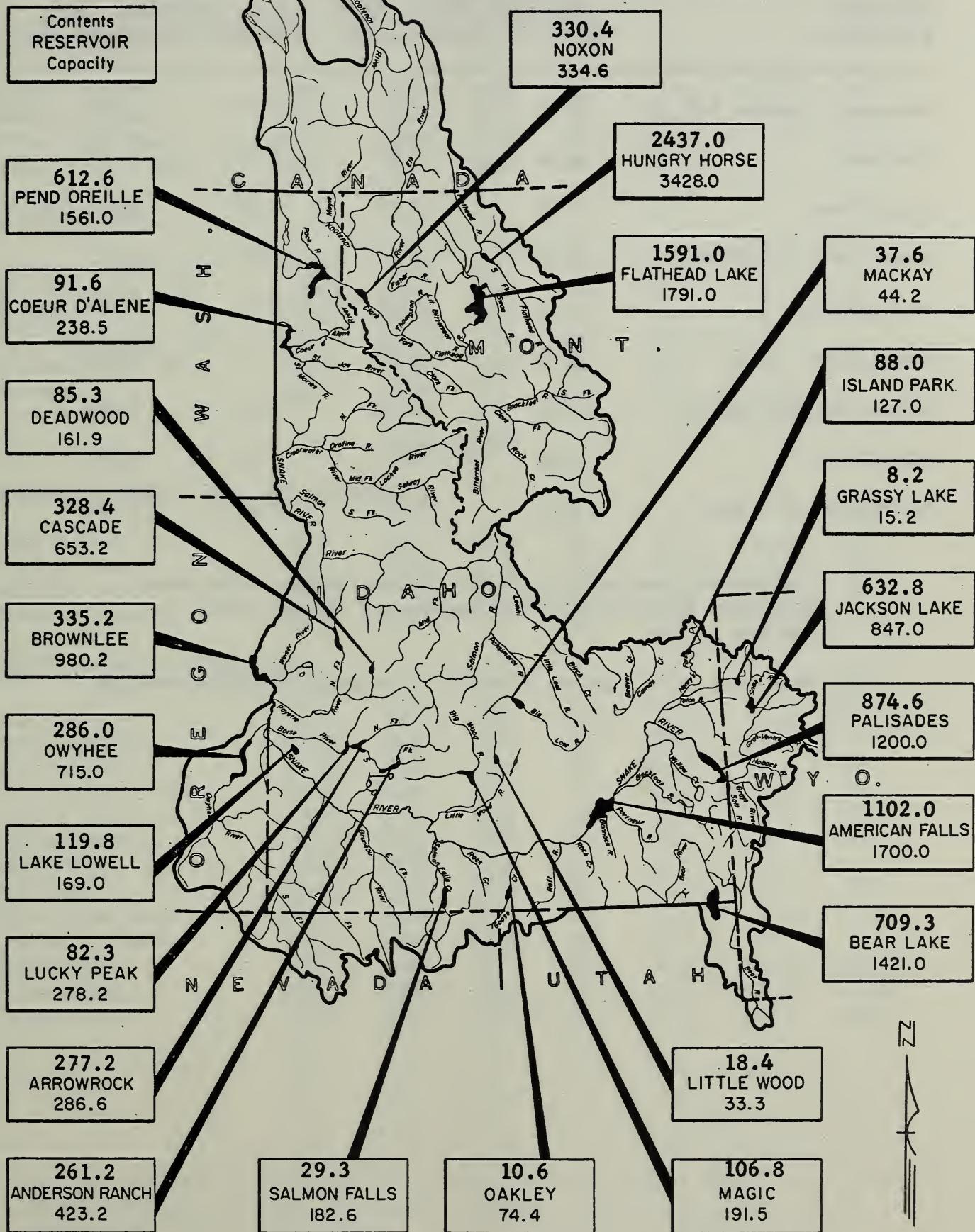
RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
<u>UPPER COLUMBIA BASIN</u>				
<u>Clark Fork-Pend Oreille</u>				
Hungry Horse	3428.0	2437.0	2775.0	2620.0
Flathead	1791.0	1591.0	1399.0	991.3
Pend Oreille	1561.0	612.6	750.4	535.7
Noxon	334.6	330.4	311.1	--
<u>Spokane</u>				
Coeur d'Alene	238.5	91.6	79.3	121.4
<u>SNAKE BASIN</u>				
<u>Snake</u>				
Jackson Lake	847.0	632.8	553.7	461.8
Palisades	1200.0	874.6	909.3	--
American Falls	1700.0	1102.0	1174.9	1335.9
Island Park	127.0	88.0	119.3	107.6
Grassy Lake	15.2	8.2	11.7	12.8
Brownlee	980.2	335.2	626.4	--
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	10.6	14.4	15.3
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	29.3	32.8	24.7
<u>Big Lost</u>				
Mackay	44.2	37.6	30.0	32.0
<u>Big Wood</u>				
Magic	191.5	106.8	93.4	123.7
<u>Little Wood</u>				
Little Wood	33.3	18.4	14.9	--
<u>Boise</u>				
Anderson Ranch	423.2	261.2	282.1	245.2
Arrowrock	286.6	277.2	247.8	170.5
Lucky Peak	278.2	82.3	73.3	--
Lake Lowell (Deer Flat)	169.0	119.8	120.6	95.7
<u>Owyhee</u>				
Owyhee	715.0	286.0	226.1	416.6
<u>Payette</u>				
Cascade	653.2	328.4	510.9	259.7
Deadwood	161.9	85.3	84.7	80.9
<u>GREAT BASIN</u>				
<u>Bear</u>				
Bear Lake	1421.0	709.3	721.3	806.4

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

FEBRUARY 1, 1964

50 0 50 100 150
SCALE IN MILES

VALLEY PRECIPITATION 1/

Division Averages and Departures

DRAINAGE DIVISIONS	Fall		Winter	
	Sep.-Oct.	-Nov. 1963 Observed Departure <u>2/</u>	Dec. 1963-Jan. 1964 Observed Departure <u>2/</u>	
Kootenai, Canada & U. S.	7.28	+1.19	6.06	-0.26
Flathead	4.34	-0.87	3.95	-0.44
Clark Fork	3.40	+0.50	2.09	+0.14
Pend Oreille-Spokane	8.05	-0.78	7.88	-0.32
Upper Snake	6.51	+1.68	9.01	+1.90
Snake River Plain	3.00	+0.90	3.95	+0.86
Salmon-Payette-Boise	5.39	+0.68	5.29	-0.05
Clearwater	5.46	-1.24	6.31	+0.41
Southeastern Oregon	3.32	+0.95	2.40	-0.15

1/ Preliminary analysis by U. S. Weather Bureau from data furnished by Meteorological Service of Canada and U. S. Weather Bureau.

2/ Departure from 15-year (1943-57) drainage division average.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD		
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR	AVERAGE ^b

UPPER COLUMBIA BASINPRIEST RIVER

Benton Meadow	16A2	2344	1/30	32	7.6	1.0	5.5
Benton Spring	16A3	4900	1/27	54	14.2	7.8	15.4
Schweitzer Bowl	16A6	4500	1/29	91	27.4	--	--
Schweitzer Ridge	16A5	6100	1/29	108	34.0	--	--

SPOKANE RIVER

Fourth of July Smt.	16B3	3100	1/31	40	10.9	1.7	--
Granite Peak (A)	15B13	6000	1/28	93	30.1	--	--
Lookout	15B2	5250	1/30	97	26.7	14.5	25.8*
Medicine Ridge (A)	15B4	6150	1/28	109	35.3	--	--
Outlaw Creek (A)	15B12	3750	1/28	59	15.6	--	--
Sherwin	16C1	3200	2/1	55	14.1	3.0	--

SNAKE BASINMEDICINE LODGE - MUD LAKE DRAINAGES

Camp Creek	12E3	6800	1/28	25	5.0	2.9	7.0
Irving Creek	12E4	7035	1/27	15	2.5	1.5	--
Kilgore	11E12	6200	1/28	28	6.0	3.1	7.2
Webber Creek	12E5	6700	1/27	16	3.0	1.4	--

HENRY'S FORK - TETON RIVER

Big Springs	11E9	6500	1/28	49	11.4	6.2	14.5
Black Canyon	11E18	7850	1/29	70	20.8	--	--
Black Moose	11E19	8125	1/29	76	22.6	--	--
Darby Canyon (A)	10F21	8250	1/31	48	13.3	9.8	--
Island Park	11E10	6315	1/28	42	8.7	4.9	11.3
Latham Springs	11E16	7650	1/29	68	17.4	--	--
Lucky Dog	11E14	6900	1/28	50	11.4	--	--
Old Road	11E15	7250	1/29	57	14.6	--	--
Pine Creek Pass	11F2	6750	1/31	45	11.7	4.8	--
Poacher's Cabin	11E17	8000	1/29	72	20.2	--	--
State Line	11F1	6400	1/31	38	9.8	4.0	10.6
Teton Pass	10F13	8500	1/31	64	17.7	7.6	24.5*
Valley View	11E8	6500	1/28	45	11.5	7.5	10.5*

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.

(A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
NAME	NO.	ELEVATION					AVERAGE ^b

BLACKFOOT - PORTNEUF RIVERS

Austin Bros. Ranch	11G3	6450	1/30	28	6.2	2.4	5.4*
China Hat	11G2	6300	1/31	21	5.0	2.2	6.0*
Dempsey Creek	12G5	6280	2/3	30	7.2	2.4	6.2*
Mink Creek	12G1	6300	1/29	43	11.0	3.2	8.2*
Pebble Creek	12G2	6550	2/3	34	10.2	1.6	8.7*
Slug Creek Divide	11G5	7225	1/30	38	10.1	5.0	--
Somsen Ranch	11G1	7000	2/3	36	8.7	3.7	8.2*

RAFT RIVER, GOOSE CREEK, SALMON FALLS CREEK, BRUNEAU RIVER

Badger Gulch	14G3	6660	1/30	33	7.7	1.2	--
Bear Creek (A)	15H1	7800	1/29	39	11.2	4.5	12.1*
Bostetter R. S. (A)	14G1	7500	1/29	51	13.9	3.7	--
Boy Scout Camp (A)	13G2	7600	1/29	31	9.2	1.8	--
Cedar Creek (A)	14G5	7000	1/29	33	9.6	1.7	8.0*
Clear Creek Meadows (A)	13H2	9050	1/29	59	17.5	8.4	--
Deadline	14G4	6900	2/1	60	17.4	6.0	15.0*
Goat Creek (A)	15H13	8800	1/29	36	9.8	2.8	10.6*
Howell Canyon	13G1	8000	1/25	57	16.1	6.7	17.2*
Hummingbird Spgs. (A)	15H15	8945	1/29	45	13.3	5.4	12.7*
Magic Mountain	14G2	6700	1/27	52	14.2	5.2	12.9*
Pole Creek R. S.	15H14	8330	1/28	45	13.3	6.8	10.7*
Red Point (A)	15H18	7940	1/29	38	11.2	1.8	--
Sheep Hollow	13G5	6200	1/31	24	6.3	0.6	--
Shoshone Basin	14G6	5740	1/31	27	6.4	0.0	4.1*
Sublett	13G3	6000	2/2	34	8.6	2.4	--
Summit Springs (A)	13G4	8500	1/29	33	8.3	T	--
Vi Pont (A)	13H3	7650	1/29	36	10.7	3.9	--
Wilson Creek (A)	15G2	7500	1/29	36	10.7	2.3	--

LITTLE LOST RIVER

Fairview Guard Sta.	13E5	5850	1/29	25	5.2	1.5	4.4*
Lost-Garfield	13E3	5700	1/29	20	3.1	1.1	3.5*
Moonshine	13E6	7250	1/29	38	8.4	4.4	8.5*
Sawmill Canyon	13E4	6000	1/29	29	6.6	3.2	7.7*

BIG LOST RIVER

Cherry Creek Pass (A)	13F13	8900	1/30	11	2.6	0.4	--
Copper Basin (A)	13F2	8000	1/30	29	8.0	1.6	--
Iron Bog	13F11	7650	2/3	38	10.4	4.2	--
Leadbelt	13F12	6800	1/30	27	6.1	2.7	--
Lost-Wood Divide (A)	14F3	8750	1/30	59	16.3	6.5	--
North Fork Meadow (A)	14F15	8150	1/30	32	8.9	3.0	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
(A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
						LAST YEAR	AVERAGE ^b

Slickrock (A)	13F14	8640	1/30	45	12.5	4.9	--
Stickney Mill (A)	14F2	7500	1/30	21	5.4	2.5	--
White Knob	13F1	7700	1/31	28	6.6	2.2	5.6*

BIG WOOD RIVER

Dollarhide Summit (A)	14F8	8620	1/30	56	15.2	9.2	20.2*
Galena	14F1	7500	1/31	53	13.5	10.0	13.3*
Galena Summit	14F12	8795	1/31	60	16.6	11.6	15.7*
Graham Ranch	14F5	6200	1/29	41	10.4	3.7	10.1
Mount Baldy	14F9	9000	1/29	55	13.8	10.6	14.5*
Soldier Rgr. Sta.	14F11	6100	1/28	32	6.5	6.2	8.8*

Little Wood River - Fish Creek

Garfield R. S.	13F4	6554	1/28	30	6.8	5.4	7.6*
Muldoon	13F5	6300	1/28	24	5.1	--	5.9*
Porcupine (A)	14F14	8350	1/30	48	13.3	7.7	--
Swede Peak (A)	13F9	7500	1/30	43	11.0	7.5	--

BOISE RIVER

Atlanta Summit (A)	15F4	7500	1/30	75	20.3	15.6	23.7*
Bad Bear	15F2	5500	2/1	52	12.3	3.4	--
Bennett Mountain	15F7	6650	1/29	53	13.8	5.5	--
Bogus Basin Road	16F4	5360	2/2	36	11.0	T	5.2*
Camas Creeks Divide(A)	15F9	5720	1/29	41	10.7	0.0	--
Couch Summit (A)	14F10	6950	1/30	49	13.6	4.4	14.0*
Danskin (A)	15F10	5650	1/29	45	11.7	1.8	--
Jackson Peak (A)	15E9	7000	1/31	81	24.0	14.2	21.9*
Little Camas Flat (A)	15F12	4950	1/29	33	8.6	0.0	--
Long Tom (A)	15F13	4550	1/29	24	6.2	0.0	--
Moores Creek Summit	15F1	6100	2/1	85	23.0	9.5	22.5
Prairie	15F6	5600	1/26	38	7.1	3.0	5.5*
Road Creek	15F3	6800	1/31	35	8.4	2.4	8.5*
Trinity Mountain	15F5	7400	1/31	81	24.0	18.7	29.5*
Willow Creek Cabin (A)	15F11	4710	1/29	24	6.2	0.0	--

OWYHEE RIVER

Antelope Ridge	16G6	5900	1/29	30	9.7	T	--
Battle Creek (A)	16G9	5700	1/31	21	5.7	0.2	--
Bull Basin (A)	16G10	5600	1/31	9	2.4	0.1	--
Hyde Pasture (A)	16G5	5800	1/31	29	7.8	0.2	--
Mud Flat	16G7	5500	1/29	30	7.0	1.0	--
Red Canyon (A)	16G11	6650	1/31	27	7.3	0.2	--
Seventy-six Creek	15H3	7100	2/2	27	6.8	T	8.3*

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.

(A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	AVERAGE ^b
Silver City	16F3	6400	1/29	45	11.8	3.5	11.0*
South Mountain	16G1	6340	1/31	37	10.2	0.4	8.5
Succor Creek (A)	16F6	6100	1/31	24	6.5	0.0	--
Triangle (A)	16G4	5150	1/31	8	2.2	0.0	--

PAYETTE RIVER

Big Creek Summit	15E2	6608	1/31	77	21.5	16.9	24.3*
Bogus Basin	16F2	6120	2/2	57	13.6	7.9	16.5*
Cozy Cove	15E8	5900	1/27	50	12.2	3.9	11.8*
Crawford R. S.	15E3	4800	1/30	32	6.6	1.0	5.3*
Deadwood Airstrip	15E10	5440	1/27	50	9.8	3.6	--
Deadwood Dam	15E7	5500	1/27	51	11.2	2.8	12.7*
Deadwood Summit	15E4	7000	1/31	96	27.4	23.1	32.7*
Greenfield Flat (A)	16E7	7370	1/30	84	23.4	23.0	--
Rock Flat Summit	16E1	5200	1/27	57	12.4	3.2	12.9*
Silver Creek Ridge	15E5	5700	1/31	56	14.0	--	--
Squaw Meadow (A)	15D2	5800	1/30	76	21.7	14.9	27.6*
Tripod Summit	16E3	5200	1/31	57	14.8	4.1	--

WEISER RIVER

Boulder Creek	16D1	5500	1/30	60	15.0	6.5	--
Mica Ridge (A)	16E6	6800	1/30	82	22.9	13.8	--
Squaw Flat (A)	16E5	6230	1/30	45	12.6	8.3	--

SALMON RIVER

Big Creek Summit	15E2	6608	1/31	77	21.5	16.9	24.3*
Borah (A)	13E8	8250	1/30	23	5.1	--	--
Chapman Creek	16D2	4215	1/29	19	4.4	1.3	2.8*
Deadwood Summit	15E4	7000	1/31	96	27.4	23.1	32.7*
Galena Summit	14F12	8795	1/31	60	16.6	11.6	15.7*
Johns Creek	16D3	3805	1/29	10	2.5	1.0	2.3*
Gibbons Pass	13D2	7100	1/29	67	16.8	10.0	16.4*
Mill Creek Summit (A)	14E1	8870	1/30	45	11.3	10.0	--
Moose Creek	13D16	6200	1/28	59	14.0	5.5	12.2*
Morgan Creek Summit	14E4	7580	1/31	41	8.5	5.2	--
Redfish Lake	14E2	6600	1/30	32	7.3	--	--
Rock Flat Summit	16E1	5200	1/27	57	12.4	3.2	12.9*
Twin Peaks (A)	14E3	10300	1/30	42	10.5	9.8	--
Vienna Mine (A)	14F4	8900	1/30	72	19.9	7.9	--
Whitebird Summit	16D5	4390	1/29	27	6.6	1.6	5.2*

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(A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	AVERAGE ^b

Lemhi River

Above Gilmore (A)	13E19	8200	1/30	27	6.0	4.4	--
Aspen-Hall Pass (A)	13E21	8110	1/30	36	8.0	--	--
Copes Camp (A)	13E17	7500	1/30	18	3.7	2.4	--
Gertson Creek (A)	13D17	8050	1/30	30	6.2	2.2	--
Hall Creek (A)	13E20	7560	1/30	17	3.8	--	--
Meadow Lake (A)	13E18	9100	1/30	48	12.0	--	--
Schwartz Lake (A)	13E16	8500	1/30	37	7.7	3.2	--

CLEARWATER RIVER

Above Greer	16C11	1240	2/1	0	0.0	1.7	--
Cayuse Airstrip	15C3	3700	1/30	41	10.1	4.2	7.8*
Crater Meadows	15C9	6100	1/31	93	30.1	--	--
Elk Butte (A)	16C15	5550	1/28	96	30.3	--	--
Fish Lake Airstrip	15C2	5000	1/30	100	27.7	19.4	26.6*
Forest	16C9	4550	1/27	26	6.5	2.5	--
Forty-nine Meadows (A)	15B3	5000	1/28	92	26.6	--	--
Goat Lake (A)	14C9	6600	1/28	87	28.2	--	--
Granite Peak (A)	15B13	6000	1/28	93	30.1	--	--
Greer Summit	16C13	3000	1/31	9	3.1	1.9	--
Hemlock Butte	15C6	5500	1/31	121	38.2	--	--
Lost Lake (A)	15B14	6000	1/28	106	34.3	--	--
McCann	16C8	4300	1/27	20	4.8	2.0	--
Midway	16C12	2200	1/31	5	1.0	1.7	--
Pierce Rgr. Sta.	15C5	3171	1/27	43	11.4	3.1	9.1*
Shanghai Summit	15C4	4600	1/31	75	21.7	--	--
Sweeney	16C10	4435	1/27	21	5.0	3.1	--

PALOUSE RIVER

Crumarine Creek	16C6	3500	1/31	39	11.5	0.9	5.6*
East Twin	16C3	4000	1/31	49	15.7	1.2	9.2*
Howard Creek	16C5	3500	1/31	36	8.7	0.5	4.0*
Moscow Mountain	16C2	4800	1/31	59	16.1	3.2	12.8*
West Twin	16C4	4200	1/31	39	10.5	1.1	8.0*

GREAT BASINBEAR RIVER

Emigrant Summit	11G6	7350	1/30	48	13.5	5.4	--
Emigration Canyon	11G7	6500	1/30	26	6.6	3.3	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. * Estimated 1943-57, 15 year Average.

(A) Aerial observation: Water content estimated.

APPENDIX

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
						LAST YEAR	AVERAGE b

Montpelier Creek

Giveout	11G16	6840	1/31	33	7.8	2.7	--
Little Beaver	11G20	6970	1/31	40	10.5	3.5	--
Montpelier Creek	11G18	6570	1/31	23	4.5	2.6	--
Whiskey Flat	11G21	6985	1/31	25	6.1	1.9	--

Mink Creek

Christensen Ranch	11G11	5600	1/28	26	5.9	2.6	6.4*
Dry Basin (A)	11G14	7900	2/2	57	16.0	--	--
Horseshoe Basin (A)	11G15	8000	2/2	50	14.0	--	--
Liberty Spring (A)	11G13	8600	2/2	69	19.4	--	--
Strawberry Mink Divide	11G10	6800	1/28	46	12.0	7.1	13.6*
Strawberry Creek	11G9	5800	1/28	33	7.3	3.4	7.7*

Cub River

Cub River R. S.	11G12	5400	1/27	33	6.6	3.2	5.9*
Willow Flat	11G4	6100	1/27	45	10.4	4.2	13.5*

MALAD RIVER

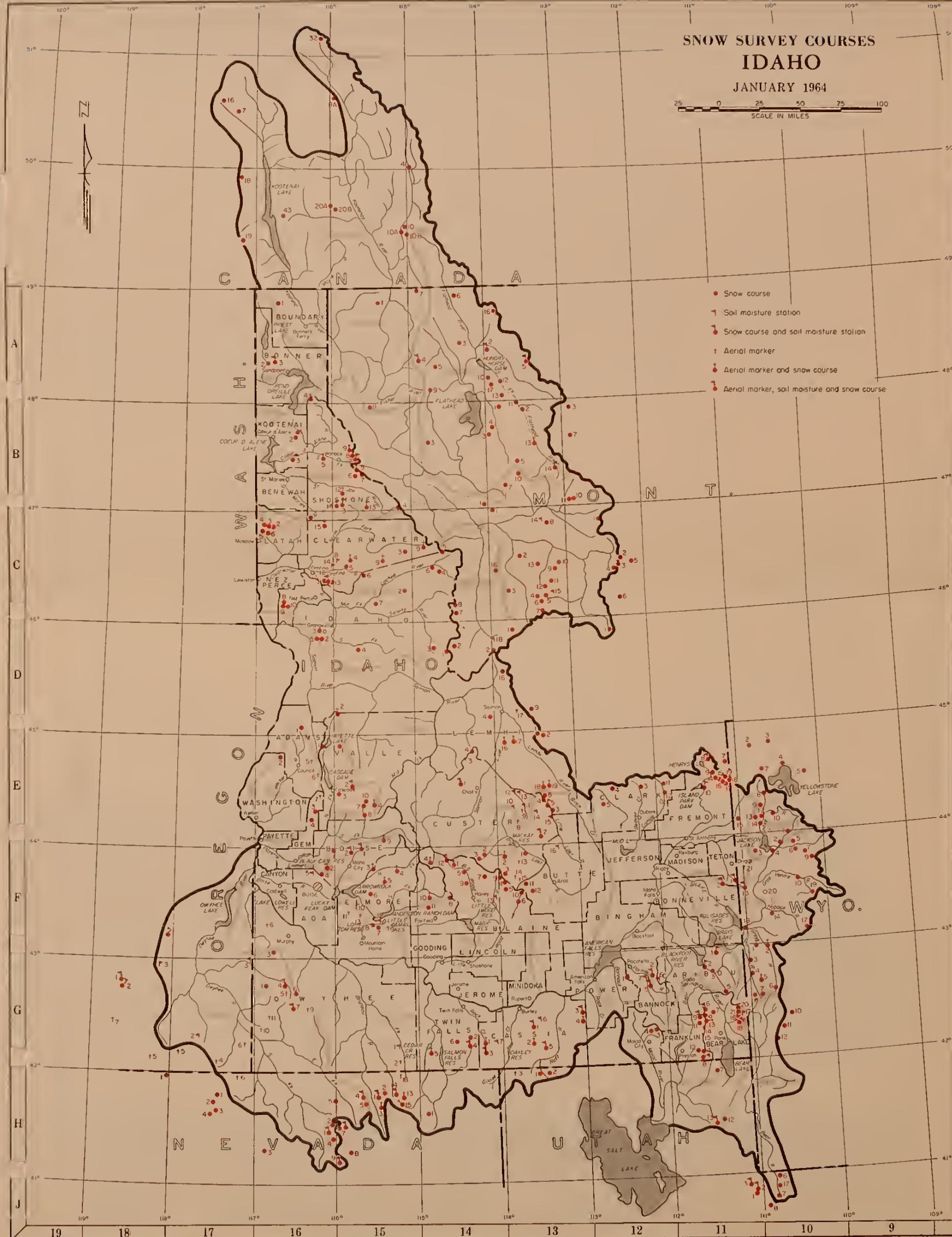
Dry Creek Flat	12G4	6350	2/3	23	5.7	1.2	4.7*
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(b) 1943-57, 15 year period. * Not located directly on this drainage. * Estimated 1943-57, 15 year Average.
 (A) Aerial observation: Water content estimated.

SNOW SURVEY COURSES IDAHO

JANUARY 1964

A horizontal scale bar with tick marks at 25, 0, 25, 50, and 75. Below the scale bar is the text "SCALE IN MILES".



Index to IDAHO SNOW COURSES

NO.	STATE	NAME	SEC.				SEC.				SEC.				SEC.				SEC.								
			SEC.	TOP.	END.	LONG.	SEC.	TOP.	END.	LONG.	SEC.	TOP.	END.	LONG.	SEC.	TOP.	END.	LONG.	SEC.	TOP.	END.	LONG.					
15511	I	KOOTENAI RIVER	36	26N	31W	5500	1002A	WY	Blind Bull	6	34N	115W	8750	1303	I	Sawmill Canyon	17	12N	26E	630	1602a	I	Mica Ridge	15	15N	22	6200
12144	N	Barree Creek	13	20N	24W	5000	10114	WY	Bryan Flat	9	30N	115W	6250	1002A	I	Wet Creek Summit	15	80	25E	8175	1602a	I	Squaw Flat	32	17N	22	6230
16	BC	Ferguson	51020	11°40'4"	2000	1003	WY	Canyon	24°44'	110°30'	7750		1003	I	Bear Canyon	26	5N	21E	8600	1602a	I	Alto's Elmwood	13	13N	26	6200	
10	BC	Fernie	49033	117910'	6000	1005A	WY	Cottonwood Lake	25	31N	118W	7500	1005A	I	Cherry Creek Pass	7	50	23E	8600	1602a	I	Big Flat	25	11N	23E	7250	
7	BC	Gerrard	49037	116241'	5100	1005A	WY	Culter Creek	40°07'	110°37'	7600	1005A	I	Copper Basin	24	68	21E	8300	1602a	I	Big Flat	21	10N	23E	8250		
13	BC	Gray Creek	49011	115960'	5000	1005A	I	Deadman Ranch	26	34N	116W	6550	1005A	I	Iron Bog	23	48	22E	8650	1602a	I	Chapman Creek	16	10N	28	6215	
208	BC	Kimberley	49102	116900'	5100	1005A	I	East Rim Divide	32	37N	111W	7650	1005A	I	Leadbelt	34	48	23E	8600	1602a	I	Lost Wood Divide	20	6N	19E	8750	
32	BC	Marble Canyon	49027	115800'	6100	1006	WY	Four Mile Meadows	35	45N	112W	7700	1005A	I	Lost Wood Divide	19	78	18E	8150	1602a	I	Marine Creek	22	22N	23E	8250	
105	BC	Morrissey Ridge	49025	117914'	205	1006	WY	Glade Creek	12	48N	116W	7200	1006	I	North Fork Meadow	20	10N	18E	8600	1602a	I	Old Stone	11	88	16E	8150	
19	BC	Nelson	49020	115930'	6100	1007	WY	Ways Boundary	33	37N	118W	5800	1007	I	John Creek	9	68	24E	8250	1602a	I	Wahl Pass	16	13	15E	7250	
104	BC	New Fernie	49059	117911'	35	10014	WY	Mc Vento Summit	36	40N	111W	8750	1007	I	Sticky Hill	9	68	19E	8300	1602a	I	Lower E. 1st	31	12N	22E	8550	
1541	N	Red Mountain	49059	117911'	35	1003	WY	Mc Vento Divide	27	33N	114W	7500	1007	I	Swan River	14	48	23E	8150	1602a	I	Mc Vento Pass	25	7N	38	8250	
81	BC	Sinclair Pass	50020	115934'	450	1007	WY	Mc Vento Divide	32	4N	112W	7200	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
1041	I	Smith Creek	29	62N	79	1007	WY	Lewis Lake Divide	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
208	BC	Sullivan Mine	49023	117931'	5100	1007	WY	Lewis Lake Divide	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
41	BC	Upper Elk River	49017	116262	420	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
1247	N	Wassel Divide	37N	24W	545	1007	WY	Maran	817	48N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
1602	I	PRIEST RIVER	27	56N	48	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
1603N	I	Benton Meadow	28N	78	1000	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
1603N	I	Benton Spring	28N	78	1000	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250	
15013	M	PEND OREILLE - CLARK FORK RIVER	23	51	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
1205	M	Black Pine	23	51	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
12010	M	Chessman Reservoir	23	51	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
12010	M	Copper Creek	1	15N	7	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
12011	M	Cotter Mine	2	15N	7	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
12010	M	Coyote Hill	12	15N	102	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
12011	M	Fred Burr Pass	12	68	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13015	M	Georgetown Lake	6	58	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13010	M	Gold Creek Lake	14	58	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
1501	M	Hoodoo Creek	9	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	1	55	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	11	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	11	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	11	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	11	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	11	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	11	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob	25	7N	38	8250	1602a	I	Mc Vento Pass	25	7N	38	8250
13012	M	Intergard Forest	11	12N	12N	100	1007	WY	Maran	1.2	45N	112W	6800	1007	I	White Knob											

Agencies Assisting with Snow Surveys, etc.

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests, and
Water Resources, British Columbia
Department of Resources and Development,
Water Resources Division

States:

Idaho State Reclamation Engineer
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
Forest Service
Agricultural Research Service

U. S. Department of Commerce
Weather Bureau

U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
Bureau of Land Management

PUBLIC UTILITIES

The Montana Power Company
Washington Water Power Company
Idaho Power Company
Utah Power and Light Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Boise Project Board of Control
Little Wood River Irrigation District
Jordan Valley Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Twin Lakes Irrigation Company
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control

PRIVATE CORPORATIONS

Amalgamated Sugar Company

*Other organizations and individuals furnish valuable information for
snow survey reports. Their cooperation is gratefully acknowledged.*

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 1247
Boise, Idaho

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE

OFFICIAL BUSINESS

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FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS

Library, Current Serial Record
U.S. Department of Agriculture
Washington 25, D.C.

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

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“The Conservation of Water begins
with the Snow Survey”